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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/670,473

09/26/2003

Kazuhiko Nagano

Q77631

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23373

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03/23/2005

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EXAMINER

DOAN, JENNIFER

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No. 10/670,473	Applicant(s) NAGANO ET AL.	
	Examiner Jennifer Doan	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☒ Claim(s) 2 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☒ All    b) ☐ Some \*    c) ☐ None of:
    - 1. ☒ Certified copies of the priority documents have been received.
    - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 092603.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Applicant's election without traverse of claims 1-2 and 6-7 in the reply filed on December 20, 2004 is acknowledged.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

2. The prior art documents submitted by applicant in the Information Disclosure Statement filed on September 26, 2003, have all been considered and made of record (note the attached copy of form PTO-1449).

#### ***Drawings***

3. The drawings, filed on September 26, 2003, are accepted.

#### ***Specification***

4. Claim 1 is objected to because of the following informalities:  
Claim 1, line 3, "respectively:" should be changed to "respectively;".  
Appropriate correction is required.

Applicants' cooperation is requested in correcting any other errors of which applicants may become aware in the specification.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanders (U.S. Patent 6,362,919) in view of Dalgoutte et al. (U.S. Patent 4,398,796).

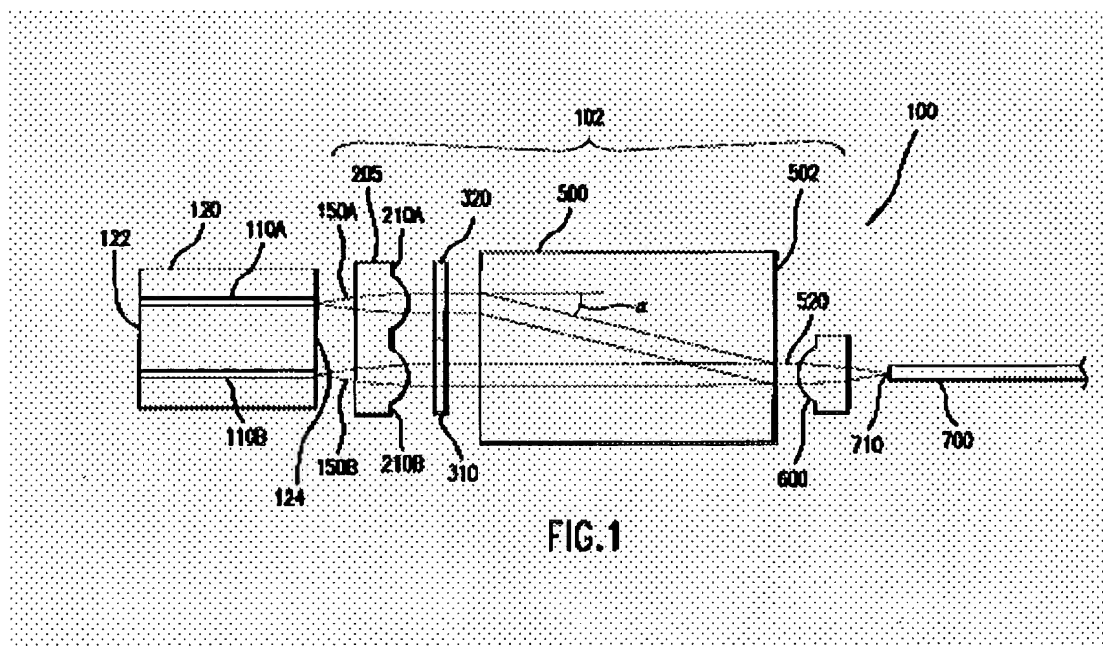
With respect to claim 1, Flanders (figure 1) discloses a laser apparatus comprising a plurality of semiconductor laser elements (110A, 110B) which emit laser

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beams (150A, 150B), respectively; a multimode optical fiber (700) (column 4, lines 35-37) which has a light-entrance end and a light-emission end; an optical condensing system (see figure 1) which collects the laser beams (150A, 150B) emitted from the plurality of semiconductor laser elements (110A, 110B) and couples the collected laser beams (150A, 150B) to the light-entrance end of the multimode optical fiber (700).

Flanders does not disclose a protection member, which is arranged at the light-emission end of the multimode optical fiber, protects the light-emission end from an atmosphere and has a light-emission window located at a predetermined distance from the light-emission end.

However, Dalgoutte et al. (figure 1 and abstract) disclose a protection member, which is arranged at the light-emission end of an optical fiber (15), protects the light-emission end from dirt or damage and has a light-emission window (14) located at a predetermined distance from the light-emission end. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Flanders' device to have the protection member with a light-emission window (accordance with the teaching of Dalgoutte et al.) for the purpose of obtaining a good protection for an optical fiber.



With respect to claim 6, Flanders substantially discloses all the limitations of the claimed invention.

Flanders does not explicitly disclose the multimode optical fiber (700) has a core diameter of 100 micrometers. However, the multimode optical fiber having a core diameter of 100 micrometers is considered to be obvious, since the light transmission is dependent on the diameter of the fiber core. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the diameter of the core of Flanders' the multimode optical fiber with the value as claimed for the purpose of obtaining a better optical signal transmission, and it also has been held that discovering an optimum value of a result effective variable involves only routine skill in the art and it is noted that the applicant does not disclose criticality in the

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value claimed. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (see MPEP § 2144.05).

### ***Allowable Subject Matter***

8. Claims 2 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest a laser apparatus including a protection member has a first face fixed to the light-emission end of the multimode optical fiber and a second face being located opposite to the first face and realizing the light-emission window as recited in claim 2; and wherein the plurality of semiconductor laser elements are made of GaN-based compound semiconductor materials as recited in claim 7.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DiGiovanni et al. (U.S. Patent 5,187,759) disclose a multi-mode optical amplifier.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan  
Patent Examiner  
March 17, 2005